

POSTO 09 DEC 2004

517,588

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
24 December 2003 (24.12.2003)

PCT

(10) International Publication Number  
**WO 03/106523 A1**

(51) International Patent Classification<sup>7</sup>: **C08F 297/08**,  
210/06, C08L 23/16

(21) International Application Number: PCT/EP03/06042

(22) International Filing Date: 10 June 2003 (10.06.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
102 26 183.0 12 June 2002 (12.06.2002) DE  
60/394,616 9 July 2002 (09.07.2002) US

(71) Applicant (for all designated States except US): **BASELL POLYOLEFINE GMBH** [DE/DE], Brühler Strasse 60, 50389 Wesseling (DE).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **RUCHS, Alexander** [DE/IT]; Via M. Cavallari 2, 44100 Ferrara (IT).  
**MORHARD, Friederike** [DE/IT]; Via Bologna 135, 44100 Ferrara (IT).

(74) Agent: **BASELL POLYOLEFINE GMBH**; Intellectual Property - F 206, Carl-Bosch-Str. 38, 67056 Ludwigshafen (DE).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Published:**

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: FLEXIBLE PROPYLENE COPOLYMER COMPOSITIONS HAVING A HIGH TRANSPARENCY

(57) Abstract: The present invention relates to a propylene copolymer composition comprising A) a propylene copolymer containing from 1 to 20% by weight of olefins other than propylene and B) at least one propylene copolymer containing from 5 to 98% by weight of olefins other than propylene, where the propylene copolymer composition is obtainable by means of a two-stage or multistage polymerization using a catalyst system based on metallocene compounds which is used in both stages.



WO 03/106523 A1

# INTERNATIONAL SEARCH REPORT

International Application No.  
PCT/EP03/06042

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C08F297/08 C08F210/06 C08L23/16

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C08F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 1 002 814 A (JAPAN POLYCHEM CORP) 24 May 2000 (2000-05-24) cited in the application page 10, line 12 -page 11, line 23 page 26, line 18 - line 25 paragraph '0047!; claims ---	1-16
X	EP 0 704 463 A (MITSUI PETROCHEMICAL IND) 3 April 1996 (1996-04-03) page 8, line 1 -page 10, line 21; claims ---	1-8, 10-16
X	WO 01 46274 A (BASELL POLYOLEFINE GMBH ;RAUSCHENBERGER VOLKER (DE); LILGE DIETER) 28 June 2001 (2001-06-28) page 23, line 43 -page 24, line 30; claims --- -/--	1-16

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

### \* Special categories of cited documents :

\*A\* document defining the general state of the art which is not considered to be of particular relevance

\*E\* earlier document but published on or after the international filing date

\*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

\*O\* document referring to an oral disclosure, use, exhibition or other means

\*P\* document published prior to the international filing date but later than the priority date claimed

\*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

\*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

\*&\* document member of the same patent family

Date of the actual completion of the international search

6 October 2003

Date of mailing of the international search report

15/10/2003

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Kaumann, E

# INTERNATIONAL SEARCH REPORT

International Application No. \_\_\_\_\_

PCT/EP 93/06042

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 94 28042 A (BASF AG ; LANGHAUSER FRANZ (DE); KERTH JUERGEN (DE); MUELLER PATRIK) 8 December 1994 (1994-12-08) cited in the application page 3, line 39 -page 4, line 6 page 4, line 27 -page 7, line 25; claims; tables ---	1-3,5-16
X	WO 93 06145 A (BASF AG) 1 April 1993 (1993-04-01): cited in the application claims; table page 5, line 1 -page 7, line 23 ---	1-3,5-16
X	EP 0 778 294 A (BASF AG) 11 June 1997 (1997-06-11) claims ---	1-13,15, 16
X	WO 02 40561 A (CUYPERS HERVE ; DELAITE EMMANUEL (BE); POLYPROPYLENE BELGIUM NV (BE) 23 May 2002 (2002-05-23) claims ---	1-13,15, 16
X	WO 98 10016 A (EXXON CHEMICAL PATENTS INC) 12 March 1998 (1998-03-12) claims page 22, line 17 -page 26, line 3 page 5, line 11 -page 12, line 19 -----	1-16

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No. ....

PCT/EP 03/06042

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 1002814	A	24-05-2000	JP 11349775 A	21-12-1999
			JP 11349776 A	21-12-1999
			JP 11349777 A	21-12-1999
			JP 11349778 A	21-12-1999
			JP 11349779 A	21-12-1999
			JP 11349780 A	21-12-1999
			JP 11349781 A	21-12-1999
			JP 11349747 A	21-12-1999
			JP 11349748 A	21-12-1999
			JP 11349749 A	21-12-1999
			EP 1002814 A1	24-05-2000
			WO 9964490 A1	16-12-1999
EP 0704463	A	03-04-1996	CA 2157399 A1	12-10-1995
			DE 69511023 D1	02-09-1999
			DE 69511023 T2	27-01-2000
			EP 0704463 A1	03-04-1996
			US 5753769 A	19-05-1998
			CN 1130915 A ,B	11-09-1996
			DE 69518094 D1	24-08-2000
			DE 69518094 T2	22-03-2001
			EP 0816395 A2	07-01-1998
			WO 9527741 A1	19-10-1995
			US 5969049 A	19-10-1999
WO 0146274	A	28-06-2001	DE 19962130 A1	05-07-2001
			DE 10004660 A1	09-08-2001
			AU 1863201 A	03-07-2001
			BR 0016590 A	10-09-2002
			CA 2395218 A1	28-06-2001
			CN 1423664 T	11-06-2003
			WO 0146274 A1	28-06-2001
			EP 1110976 A1	27-06-2001
			EP 1252202 A1	30-10-2002
			JP 2001247729 A	11-09-2001
			US 2003130443 A1	10-07-2003
			US 2001004662 A1	21-06-2001
WO 9428042	A	08-12-1994	DE 4317655 A1	01-12-1994
			DE 59405315 D1	02-04-1998
			WO 9428042 A1	08-12-1994
			EP 0703932 A1	03-04-1996
			ES 2112543 T3	01-04-1998
			JP 8510491 T	05-11-1996
			US 5753773 A	19-05-1998
WO 9306145	A	01-04-1993	DE 4130429 A1	18-03-1993
			WO 9306145 A1	01-04-1993
EP 0778294	A	11-06-1997	DE 19545498 A1	12-06-1997
			US 5773516 A	30-06-1998
			AT 179433 T	15-05-1999
			AU 710989 B2	07-10-1999
			AU 7414396 A	12-06-1997
			CN 1158337 A ,B	03-09-1997
			DE 59601766 D1	02-06-1999
			EP 0778294 A1	11-06-1997
			ES 2131375 T3	16-07-1999

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No.

PCT/93/06042

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 0778294	A		JP 9272717 A	21-10-1997
			ZA 9610222 A	05-06-1998
WO 0240561	A	23-05-2002	US 6586528 B1	01-07-2003
			AU 3166202 A	27-05-2002
			WO 0240561 A2	23-05-2002
WO 9810016	A	12-03-1998	CN 1229420 A , B	22-09-1999
			DE 69713343 D1	18-07-2002
			DE 69713343 T2	10-10-2002
			EP 0923618 A1	23-06-1999
			ES 2174278 T3	01-11-2002
			JP 2001500176 T	09-01-2001
			WO 9810016 A1	12-03-1998
			US 2003153689 A1	14-08-2003
			US 2001044506 A1	22-11-2001
			US 2001039314 A1	08-11-2001